exhibit of Lord Kelvin's inventions. On Tuesday, June 16, addresses will be presented to Lord Kelvin by delegates from home and foreign University bodies, from several of the learned Societies of which he is a member, from student delegates from other Universities, and from the students and graduates of the University of Glasgow. It is expected that the honorary degree of LL.D. will be conferred on the same day on several of the distinguished foreign visitors. On Tuesday evening, June 16, the City will give a banquet to Lord Kelvin, to which the visitors who have come to do him honour have been invited.

On Wednesday, June 17, the Senate of the University will invite the visitors of the University staff to sail down the Clyde. The students of the University also invite the students' delegates from other Universities to a similar trip.

Representative scientific men—about fifty in number—from America and the British colonies, and from all the European countries, and about 150 from the United Kingdom, have signified their intention to be present.

The exceptional nature of the occasion, and the feeling which Lord Kelvin's name awakens everywhere, will give these proceedings a peculiar interest.

NOTES.

THE University of Wales is to be represented at the forthcoming celebration of the Kelvin jubilee by Principal J. Viriamu Jones, F.R.S., of Cardiff (the Vice-Chancellor for the year), and Prof. A. Gray, of Bangor.

THE Mayor of Bristol, at the suggestion of a deputation representing the chief local scientific societies and educational institutions, has decided to invite the British Association to visit Bristol in 1898. A visit to Bristol after the Toronto meeting would be made in a singularly opportune year, for it was in 1497 that Cabot discovered the American mainland, where the Association will be in 1897, whence he started on his second voyage in 1498. The meeting would thus serve to commemorate the tercentenary of a memorable voyage of one of Bristol's greatest citizens. That the Association should take Bristol after Canada would, therefore, be very appropriate.

THE Epidemiological Society of London has resolved, having regard to the historical connection of the Society with vaccination and other preventive measures, to found a medal in memory of Jenner. It is proposed that the medal shall be founded with a view to the promotion of epidemiological research, and that it shall be bestowed from time to time by this Society on persons who shall have contributed to the knowledge of preventive medicine. Donations (not exceeding one guinea) may be sent to the Honorary Treasurer, 6 Hereford Mansions, Bayswater, W.

THE death is announced of Dr. August Hosius, Professor of Mineralogy and Palæontology in Münster University.

THE King of Belgium has honoured Prof. Leo Errera, Professor of Botany in the Université Libre de Bruxelles, and Director of the Institut botanique, by creating him a Chevalier of the Order of Léopold.

REUTER'S correspondent at Adelaide states that a well-equipped expedition started on May 22 to explore the interior of the Australian continent. It will be absent eighteen months. Mr. Calvert is defraying the cost of the expedition.

AN extra Friday evening meeting of the members of the Royal Institution will be held on June 19, when Mr. Thomas C. Martin, of New York, American Delegate to the Kelvin jubilee, will deliver a lecture on "The Utilisation of Niagara."

WE learn from the *American Naturalist* that a biological station will be opened on June 22 at Biscayne Bay, Florida, and will remain open for six weeks. The place is well situated for the study of the tropical and subtropical flora and fauna, while its situation upon the continent makes it more readily accessible than the West India Islands. The station will be under the direction of Prof. Charles L. Edwards, of the University of Cincinnati.

MR. T. D. A. COCKERELL proposes to establish a biological station at Las Cruces, New Mexico, U.S.A. The climate of the country is exceptionally favourable for persons in the earlier stages of phthisis, while the abundance of new and interesting forms of life, especially among the insects, is remarkable. Many interesting general problems, such as those of the life-zones, can also be studied in New Mexico to great advantage. A beginning will be made this summer if students can be found. Mr. Cockerell will be glad to hear from any who are interested in the matter, and especially from those who might be inclined to work with him for longer or shorter periods during the present summer.

A GENERAL meeting of the members of the Federated Institution of Mining Engineers will be held in London on Thursday, June 4, and on Friday, June 5. The following papers will be read, or taken as read:—Presidential address, by Mr. Geo. A. Mitchell; "The Causes of Death in Colliery Explosions," by Dr. J. S. Haldane; "Road Engines," by Mr. John McLaren; "The Gobert Freezing Process of Shaft-sinking," by Mr. A. Gobert; "Precautions necessary in the Use of Electricity in Coal-mines," by Mr. H. W. Ravenshaw. The papers down for discussion are: "Photography in the Technology of Explosives," by Mr. Alfred Siersch; "Coal-washing Plant at the Wirral Colliery, Neston, Cheshire," by Mr. J. Platt; "Lead and Lap of Winding and other Engines," by Mr. Hargrave Walters.

THE gold medal of the Linnean Society of London, which is annually presented alternately to a zoologist and to a botanist, has this year been awarded to Prof. George James Allman, F.R.S., for distinguished researches in zoology. A graduate in medicine in the University of Dublin in 1844, and subsequently Regius Professor of Botany there, he was elected a Fellow of the Royal Society in 1854, and from 1855 to 1870 held the chair of Regius Professor of Natural History in the University of Edinburgh, where the honorary degree of LL.D. was conferred upon him. In 1873 he was awarded the "Royal Medal" of the Royal Society. In 1874 he was elected President of the Linnean Society in succession to Mr. Bentham, and in 1879 was President of the British Association on the occasion of its meeting at Sheffield. His chief scientific work has relation to the lower forms of animal life, concerning which his most notable publications are his monographs of the Fresh-water Polyzoa and Hydroida—issued by the Ray Society—and his exhaustive report on the Hydroida collected by the *Challenger* exploring expedition. The medal will be presented at the anniversary meeting of the Linnean Society, to be held on Thursday, June 4, at 8 p.m.

MESSRS. C. GRIFFIN AND CO. have just published the thirteenth annual issue of their "Year-Book of Scientific and Learned Societies of Great Britain and Ireland." The work comprises lists of papers read during 1895 before these societies, which are arranged into fourteen classes according to the branches of science fostered by them. As a handy and accurate index to our scientific societies, and a record of progress, the work is most useful.

WE learn from *La Nature* of May 23 that a meeting was held on April 24, at the Geological and Geographical Society of Stockholm, in favour of the Polar expedition of M. Andrée. That gentleman opened the meeting by an explanation of the preparations already made, and of the prospects of the expedition. The generator of the hydrogen gas is nearly completed, and the steamer *La Vierge* is in dock at Gothenburg. A folding canvas boat, to carry three persons and 600 kilograms of provisions, has also been constructed. The expedition is to sail from Gothenburg on June 7, and should arrive at Spitzbergen about the 18th of that month. After that, M. Andrée cannot state what may happen—whether it will be a long balloon voyage, or a sledge and boat journey. M. Ekholm enumerated the various instruments which will be taken; they include several self-recording meteorological instruments, photographic apparatus, and electrometer. M. Strindberg gave details respecting the construction of the balloon. After the meeting a banquet took place, at which Baron Nordenskiold wished success to the expedition, to which M. Andrée warmly responded.

IN spite of the numerous excursions that have been previously made to Spitzbergen, it is remarkable that so very little has been done in the interior. The botany of its coast-lands is as well known as that of many British counties; its mosses, hepatics, and marine algæ have been carefully monographed. Many groups of the fauna have been equally well described. The geology of the coast sections has been mapped, and rich collections of fossils made from the remarkably rich sequence of rocks ranging from the Devonian to the Pleistocene, and including representatives of the Carboniferous, Permian, Trias, Jurassic, Cretaceous and Miocene. Nevertheless hardly anything is known of the interior of West Spitzbergen, the largest island of the archipelago. Nordenskiöld and Palander crossed the north-east island in June 1873, but up to the present only two short excursions have been made on to the ice-sheet of the main island. The first of these was a short traverse by the late Gustav Nordenskiöld from Horn Sound to Bel Sound, and the other a visit by Ribot to Mount Milne-Edwards, to the south-east of Ice Fiord. The interior is known to be covered by an ice-sheet, and a careful study of this would no doubt throw much light on the problems of the former glaciation of Europe. An effort to fill this remarkable gap in our knowledge is now being made by Sir W. Martin Conway, who has organised an expedition to Spitzbergen, which will start on June 2. The main object of the expedition is the study of the interior, but it is hoped also to supplement our knowledge of the fauna of the coast-lands, and to make extensive collections for this country. The party will consist of five other members, Mr. Ed. Conway, Mr. R. D. Darbishire, Mr. E. J. Garwood, Dr. J. W. Gregory, and Mr. A. Trevor-Battye. The party expects to return early in September. The collections made will be the property of the British Museum, the Trustees of that institution having lent Dr. Gregory's services to the expedition.

WRITING to the *Electrician* on the subject of Röntgen rays, Mr. James Mark Barr enunciates the proposition that reversing the current in a "focusing" tube improves it for its normal working after "fatiguing" has set in. He adds that the reverse current used should be comparatively weak.

A FINE specimen of a rare Marine Chalonian, the Leathery Turtle (*Dermochelys coriacea*) has lately been presented to the South African Museum by Mr. P. C. Keytel, of Cape Town. The animal was stranded on Blaauwberg beach in Table Bay, and was secured by some fishermen; its length is over 5 feet, and its breadth more than 2 feet.

IN the *Indian Engineer* some interesting statistics are given relating to the development of the coal fields in Labuan. The island contains four seams of coal varying in thickness from 1½ to 10 feet, and running from north-east to south-west. The coal is good steam coal containing an abundance of resin, and the outcrops are three-quarters of a mile from the sea. In prospecting for coal near the head of the Ogangara River, oil was struck, which continued to flow for a few days, when the spring became exhausted. The yearly output of coal three years ago was 18,000 tons.

THE current number of the *Journal of the College of Science*, at Tōkyō, fully maintains the standard of its predecessors; but we note with deep regret the announcement of the death of Mr. Hirota, whose last paper (on the "Dendritic Appendage of the Urogenital Papilla of a Siluroid") it contains. The half-dozen monographs which have fallen from Mr. Hirota's pen are of exceptional merit, and show their author to have been a worker of much promise and sound judgment. His first paper on the "Sero-Amniotic Connection and the Fœtal Membranes in the Chick" came as a revelation; and let it be recorded to his lasting memory, that he therein disposed of an error in fundamentals, of which Western embryologists, studying the hen's egg *ad nauseum*, had never dreamt. We tender our Eastern confrères our profoundest sympathy, for their loss is our own.

A PROTEST is raised in the *Agricultural Gazette of New South Wales* (vol. vii. part 2) against the indiscriminate destruction of beneficent lady-birds. The small yellow and black-banded pumpkin beetle, *Aulocophora hilaris*, Boisd., feeds upon many plants frequented by the 28-spotted lady-bird, *Epilachna 28-punctata*, and it is common to find these two destructive species side by side upon the same plant. This appears to have led to the misapplication of the term "lady-bird" to *Aulocophora hilaris*, with the unfortunate result that the whole of the group Coccinellidæ, to which the appellation properly belongs, has been, in the most general terms, denounced and described as a scourge. Considering that, out of the large number of species of lady-birds to be found in New South Wales, only two—*Epilachna 28-punctata* and *Epilachna guttato-pustulata*—are really injurious, it would be a great misfortune if all the useful species of Coccinellidæ were to be ostracised on their account.

THE last number of the American journal, *Modern Medicine and Bacteriological Review*, draws attention to a report recently drawn up by Prof. Conn, of the Western University, on the bacteriology of milk, published by the United States Department of Agriculture. Examinations of milk made at various places yielded numbers varying from 330,000 to 9,000,000 microbes per ounce. The milk-supply of Boston was found to be particularly rich in microbes, as many as 135 million germs being found per ounce. The *Boston Medical and Surgical Journal* lately reported a case in which a young man contracted tubercular disease by drinking milk from a herd of cows, fifty-nine of which were afterwards found to be tuberculous, whilst two persons employed in making butter from the same herd, and who drank large quantities of milk, also became infected. Although much has been accomplished in our country of late years to improve the sanitary conditions surrounding our public milk-supplies, yet a great deal still remains to be done, and there cannot be a doubt that the next important step will be the distribution by our dairies of "pasteurised" milk and butter. The example has already been set by one important London dairy company, and it is to be hoped that others will follow what is, after all, but a tardy imitation of what has been done for some time past by our more enlightened neighbours on the continent.

IN commemoration of the Jenner centenary, a special number of the *British Medical Journal* has been issued, containing a number of interesting papers on Edward Jenner's life, work, and writings.

THE Clarendon Press announces for early publication a "Flora of Berkshire," by Mr. G. C. Druce. It is intended to be not only a catalogue, but also a history, of the plants of the county.

DR. PH. MOLLE has reprinted from the *Memoirs* of the Royal Academy of Belgium his "Recherches de microchimie comparée sur la localisation des alcaloïdes dans les Solanacées." These alkaloids are found chiefly in the superficial organs of the plant, especially in the bark, where they serve to protect it against the attacks of herbivorous animals. They are entirely absent from both the embryo and the endosperm of the ripe seeds, and can in no sense be regarded as reserve food-materials; if they occur at all in the seed, it is only in its integument.

MR. C. F. CLARKE, of Plumstead, writes to point out a clerical slip in the notice of Dr. Orchard's "Astronomy in Milton's Paradise Lost," by which Satan's shield is said to be compared to Galileo's glass (not a very large object, that of the Lick or Yerkes telescope might have been more appropriate had such then existed), instead of the moon as viewed through it. Besides the three constellations mentioned in our notice, Milton also alludes to Orion, supposed by him, as by the ancient poets, to be associated with windy and stormy weather.

WE welcome No. 12 of the *Alembic Club Reprints*, published by Messrs. W. F. Clay, Edinburgh. The volume contains Faraday's papers on "The Liquefaction of Gases" (1823-1845), and an appendix consisting of papers by Thomas Northmore on the compression of gases, which were referred to by Faraday, in his historical statement, in the following terms. "The most remarkable and direct experiments I have yet met with in the course of my search after such as were connected with the condensation of gases into liquids, are a series made by Mr. Northmore in the years 1805-6." Students of physics, and every one interested in the subject of the liquefaction of gas, should possess a copy of this latest addition to the *Alembic Club Reprints*.

THE Deutsche Seewarte has recently issued the last of its series of atlases dealing with maritime meteorology and other useful information relating to the great oceans. The present work, which refers to the Pacific Ocean, contains thirty-one folio coloured charts, with explanatory text, and, like its predecessors, forms an appendix to the Sailing Directions which are published in a separate form. The atlases for the Atlantic and Indian Oceans have been in the hands of German sailors for some years, and, being in a clear and popular form, are almost equally useful to other countries. In addition to the usual charts of ocean currents, specific gravity, temperature of air and sea-surface, relative frequency of winds, distribution of rainfall, &c., there are others containing useful *data*, among which we may mention the mean sailing routes, and the distribution and principal haunts of various kinds of whales. The charts are based on a large amount of information supplied by German captains, and include materials collected by other nations. A just appreciation of this part of the work of the Deutsche Seewarte is shown by the fact that it has been found necessary to prepare a second edition of the Sailing Directions for the Atlantic Ocean, which will be published as soon as practicable.

THE *Journal* of the Asiatic Society of Bengal can scarcely be said to have a place in our chemical libraries; the current number, however, contains a paper by Dr. P. C. Rây, of the Presidency College, Calcutta, on mercurous nitrite, that is worthy of note. During a preparation of mercurous nitrate by the action of dilute nitric acid in the cold on mercury, yellow crystals were deposited which, upon examination, proved to be mercurous nitrite. The analysis proved somewhat difficult, as the substance dissociates in solution into metallic mercury and mercuric nitrite. The fact that this nitrite is stable in strongly acid solutions, is an additional proo of the views advanced by Dr. Divers as to the "nitronic" constitution of the nitrites of copper, silver, mercury, and bismuth. The stability of silver nitrite towards nitric acid has already been noticed by Acworth and Armstrong, and by Russell, and the behaviour of mercurous nitrite is closely analogous. Dr. Rây proposes, in a subsequent communication, to give the results of an attempt to prepare fatty nitro-derivatives from this compound.

THE Commissioners of the St. George's Public Library record, in their second report, that good progress has been made with the arrangement of the cases and specimens comprised in the natural history collection presented to the library. The donor generously undertook the laborious task of installing, classifying, and labelling the whole of the objects, as well as the preparation of the numerous explanatory reading-cases, which will contribute so much to the proper understanding of the contents of the room. The collection may now be considered as ready for the use of students, and it affords an illustration of what can be done to connect the public libraries with natural history museums generally. Certain annual subscriptions were promised for three consecutive years towards the cost of maintaining the collection, but unfortunately in the second year (1895) the full amount has not been realised. It is stated that at least £150 is required to cover the working expenses during the four years for which the Commissioners have undertaken to house the collection, until it shall be seen whether good use is made of it by natural history students; the cost of *installation* having been defrayed partly out of the library rate and partly by the donor.

THE School of Practical Science at Toronto may be proud of an Engineering Society which can issue a volume of *Proceedings* (No. 9) such as we have just received. The papers in the volume are of more than engineering interest. Mr. McLennan has a paper on "Röntgen Radiation," detailing results obtained by him; and special attention should be called to an excellent essay on "The Pendulum," by Mr. A. M. Scott, which gained for the author the 1851 Exhibition Science Scholarship allocated by the University of Toronto. There is also an original contribution on the action of heat upon cements, and another on brickwork masonry. Even astronomy finds a place in the volume. Mr. W. L. Innes contributes a brief history of celestial science, and Mr. A. T. Laing describes an ingenious planetarium devised by him. As an instance of the value of a little astronomical knowledge, we may refer to a short paper on "Aspect and Prospect," by Mr. C. H. C. Wright, in which a diagram is given to show the azimuth of the sun at any time of the year for any place in the latitude of Toronto. The diagram, which is due to Prof. Kerr, should be of much assistance to architects in deciding upon the best aspects for windows of various rooms. Other subjects treated are lightning arresters, planimeters, standards in machine shop practice, the Chicago Canal, and a simple form of telemeter.

THE Report of the American Museum of Natural History, just issued, shows notable increase in the various collections, and large and expensive additions to the building. The expeditions to Peru, Honduras, Sumatra and Mexico, have resulted in the acquisition of a large number of interesting objects and photographs. In the department of Public Instruction, regular courses of lectures have been delivered to the teachers of the public schools, and free lectures to the people on public holidays as well as every week. The department of Mammalogy and Ornithology received in 1895 the William Dutcher Collection of New York Birds, numbering over two thousand specimens, contributed by the Linnean Society of New York. A very large number of Arctic mammals and birds have been received as the result of the expedition to Greenland. The department of Vertebrate Palæontology has been enriched by the Cope Collection of Fossil Mammals of North America, comprising nearly ten thousand specimens, representing 483 species. The acquisition of this valuable collection establishes the Museum as a centre of study and research in palæontology. Increasing interest in the Museum has been evinced by all classes of the citizens of New York. Every course of lectures has been attended by crowded audiences, and pupils of public and private schools, as well as students of science, have derived advantage from the library as well as from the collections.

Several new editions of scientific works have reached us during the past few days. The first volume of a new edition of Prof. Fleming's systematic treatise on "The Alternate Current Transformer," dealing with the induction of electric currents, has been published by the *Electrician* Printing and Publishing Co. The great progress made during the seven years which have elapsed since the appearance of the original work, has necessitated a thorough revision of the matter, and the volume as it stands now will be appreciated by all who are concerned with alternating-current practice or investigations. Another volume having practical electricity for its subject is "Electric Lighting and Power Distribution" (Whittaker and Co.), by W. Perren Maycock. The first volume of the third edition of this work has been issued in an enlarged form, after careful revision. The second edition of the first volume of Dr. Schlich's "Manual of Forestry" has been published by Messrs. Bradbury, Agnew, and Co. The original was reviewed in Nature in December 1889 (vol. xli. p. 121), and quite recently (April 2, p. 510) was referred to in these columns. The second edition contains a new part on the State in relation to forestry, and a general review of the timber requirements of the British Empire. Messrs. Longmans, Green, and Co. have issued a second edition of "The Essentials of Chemical Physiology," by Dr. W. D. Halliburton. The chief alterations made are those rendered necessary by the advance of knowledge since 1893, when the first edition was published. The fifth edition of "Southall's Organic Materia Medica," by J. Barclay, has been published by Messrs. J. and A. Churchill. To quote the sub-title, the volume is "a handbook treating of some of the more important of the animal and vegetable drugs made use of in medicine, including the whole of those contained in the British Pharmacopœia." New editions of two volumes by the late Dr. J. E. Taylor, have been received from Messrs. W. H. Allen and Co. The books are "Nature's Byepaths," a series of recreative papers in natural history, and "The Aquarium," a popular manual on the history, construction, and principles of management of public aquaria. Dr. G. Herbert Fowler has edited the sixth edition of the late Prof. Milne Marshall's valuable work on the anatomy, histology, and dembryology of "The Frog" (David Nutt). A few additions and alterations have been made, but the work remains substantially the same practical and educational handbook that it ever was. Finally, the recent changes in the Physiography Syllabus of the Department of Science and Art have resulted in the production of a new edition (the sixth) of "Earth Knowledge" (Part II.) by W. Jerome Harrison and H. R. Wakefield. The book follows the Department's Advanced Syllabus, and appears to fulfil the purpose for which it has been designed.

The additions to the Zoological Society's Gardens during the past week include a Macaque Monkey (*Macacus cynomolgus*) from India, presented by Sir William Call; a Blue-bearded Jay (*Cyanocorax cyanopogan*) from Para, presented by Mr. H. C. T. Beadnell; four Puff Adders (*Vipera arietans*), two Ring-hals Snakes (*Sepedon hæmachates*), an Egyptian Cobra (*Naia haje*), three Cape Vipers (*Causus rhombeatus*), a Cape Bucephalus (*Bucephalus capensis*), two Infernal Snakes (*Boodon infernalis*), a Nilotic Monitor (*Varanus niloticus*) from South Africa, presented by Mr. J. E. Matcham; a Grey Ichneumon (*Herpestes griseus*) from India, deposited; two Indian Tree Ducks (*Dendrocygna javanica*) from India, purchased; a Japanese Deer (*Cervus sika*), born in the Gardens.

OUR ASTRONOMICAL COLUMN.

Temperature Errors in Meridian Observations.—M. Hamy has applied his method of interference fringes to a study of the errors caused in meridian observations by the radiations of the sources of light usually employed in observatories, as well as those due to the presence of the observer himself (*Bull. Ast.*, vol. xiii. p. 178). The researches have completely demonstrated that the unequal distribution of light sources may produce errors in the measures amounting to several seconds of arc, while the heat from the observer may affect the results to the extent of several tenths of a second. It is evident therefore that the subject is one of great importance, and the interferential method is specially adapted for its investigation. M. Hamy has arrived at his conclusions from experiments made with the Gambey meridian circle of the Paris Observatory. In the case of an ordinary gas flame at a distance of 0·83 metre from the telescope, the mean angular displacement of the optic axis with respect to the meridian amounted to 2″·1, the flame being lit for ten minutes. Other observations indicate that the deviation is sensibly in inverse proportion to the square of the distance of the flame from the optic axis. The effects of different sources of light were also compared at one metre distance, and the practical outcome is that gas flames provided with chimneys are to be studiously avoided, the variation in collimation amounting in this case to 4″·4. The errors due to the heat of the human body are greatest in the case of declination measures, owing to the greater heating of the under side of the telescope tube. It is evident that these errors will depend to some extent upon the materials of which the instrument is constructed, and M. Hamy is of opinion that the best possible material is a metal of high conductivity, such as copper, in which case inequalities of temperature would be almost impossible.

Search Ephemeris for Comet 1889 V.—The following is a continuation of Dr. Bauschinger's search ephemeris for the return of Brooks's periodic comet (1889 V) (*Ast. Nach.*, No. 3350).

	R.A.		Decl.		Brightness.
	h. m. s.		° ′		
May 28 ...	22 2 38	...	−19 44	...	0·44
June 1 ...	7 17	...	19 29	..	0·48
5 ...	11 43	...	19 14	...	0·52
9 ...	15 54	...	19 1	...	0·56
13 ...	19 49	...	18 49	...	0·61
17 ...	23 26	...	18 39	...	0·66
21 ...	26 44	...	18 30	...	0·71
25 ...	22 29 44	...	−18 22	...	0·77

The unit of theoretical brightness is that on 1889 July 8, the date of the first accurate observation. The comet was last seen in January 1891, at the Lick Observatory, when the calculated brightness was only 0·08. During June the computed path lies in the southern part of Aquarius, so that observations can only be made in the early morning.

Constants for Nautical Almanacs.—At a convention of Directors of Nautical Almanacs, held at Paris after the recent congress of the International Photographic Chart, Dr. Gill's value of the solar parallax (8″·80), resulting from heliometer observations of minor planets, was adopted, and consequently the constant of aberration becomes 20″·47. Dr. Gill's value for the mass of the moon, leading to 6″·21 for the nutation, was also adopted, and Newcomb's value was accepted for the precession.

The Planet Mercury.—A postcard from Dr. Kreutz, Kiel, contains the information that Mr. Leo Brenner, of the Manora Observatory, saw the dark part of the planet Mercury sharp and distinct on May 18, at 23h. Manora time.

STELLAR PHOTOGRAPHY WITH SMALL TELESCOPES WITHOUT DRIVING-CLOCKS.

Stellar photography has now become such an important branch of astronomy, that anything which will encourage possessors of small telescopes to turn their energies in this direction will tend towards the advancement of the celestial sciences. It is proposed to show here that useful work may be done by amateur astronomers with their ordinary small refractors, and with none of the mechanical contrivances which are essential for such large telescopes as are used in the international photographic survey of the heavens, which are driven by elaborate and